

REMARKS

Applicants respectfully request reconsideration of the present application in view of the reasons that follow. No new matter has been added. Claims 26-40 are pending in this application.

Rejection of Claims 26, 28-31, 33-36 and 38-39 under 35 U.S.C. § 102(b) and § 103(a)

On page 2 of the Office Action, Claims 26, 28-31, 33-36 and 38-39 were rejected under 35 U.S.C. § 102(b) as being allegedly anticipated by U.S. Patent Publication No. 2001/0004279 (issued as U.S. Patent No. 6,657,700) to Sako *et al.* (*Sako*). Additionally, on page 4 of the Office Action, Claims 27 and 37 were rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over *Sako* in view of U.S. Patent No. 5,623,361 to Engle *et al.* (*Engle*).

Applicants respectfully submit that Claims 26-40 are allowable over the references cited by the Examiner. In particular, Applicants respectfully submit that the cited references, alone and in combination, fail to teach, suggest, or describe at least the elements recited in independent Claims 26 and 33.

Independent Claim 26 recites in part:

an array of electrically controllable lenses positioned between the substrate layer and the pinhole mask to control the divergence of light received through the substrate and the lenses towards the pinhole mask, wherein the light is focused into a pinhole by a lens of the array of electrically controllable lenses to illuminate the associated pixel and is transmitted unfocused by the lens to darken the associated pixel

(Underlining added). Independent Claim 33 recites in part:

determining whether to illuminate a pixel of the display device; and
if it is determined to illuminate the pixel, controlling a lens of the array of electrically controllable lenses to focus the received light into a pinhole of an array of pinholes

(Underlining added).

The references cited by the Examiner in the Office Action, alone and in combination, fail to disclose or suggest at least the features recited above. For example, *Sako* describes a “reflection-type liquid crystal display device 1,” illustrated in Fig. 1. *Sako* states:

A reflection-type liquid crystal display device 1 includes a transparent upper substrate 103 having serrated protruding portions thereon and a transparent flat lower substrate 106. The upper substrate 103 has transparent upper electrodes 104a arranged on the protruding portions and the lower substrate 106 has transparent lower electrodes 104b crossing the upper electrodes 104a so that crossing parts of electrodes 104a and 104b define pixels P (FIG. 9). Each protruding portion of the upper substrate 103 has a surface downwardly inclined to define a prism. The lower substrate 106 has light reflection portions 107 and light absorption portions 108 on its lower surface. A liquid crystal layer 105 is sandwiched between the upper substrate 103 and the lower substrate 106.

Upon switching on or off of an electric field applied to the liquid crystal layer 105, liquid crystal molecules in the liquid crystal layer 105 are changed between a state in which the liquid crystal molecules are aligned perpendicular to the lower substrate 106 and a state in which the liquid crystal molecules are aligned parallel to the lower substrate 106.

(Col. 5, lines 10-28; underlining and bolding added). Thus, *Sako* describes a substrate having light reflecting portions that reflect light (e.g. 107, 117 in Figs. 1 and 6) and light absorbing portions that absorb light (e.g., 108, 118 in Figs. 1 and 6). *Sako* further states:

When the liquid crystal molecules are aligned perpendicular to the lower substrate 106, light incident on the upper substrate 103 goes straight on as shown by numeral 109 and is reflected by the light reflection portions 107 and then goes outside the display device 1 through the upper substrate 103.

On the other hand, when the liquid crystal molecules are aligned parallel to the lower substrate 106, the light is deflected through the upper and lower substrates having the refractive index n_g and the liquid crystal layer having the refractive index $(n_e+n_o)/2$ as indicated by an optical path 110. Then, the light goes to the light absorption portion 108 so that the light is absorbed and not irradiated to the outside.

(Col. 5, lines 34-45; underlining and bolding added). Thus, *Sako* teaches that the light goes straight onto and is reflected by the light reflecting portion when the light goes outside the display device. Conversely, *Sako* teaches that the light is deflected onto and is absorbed by the light absorbing portion when the light is not irradiated outside the display device.

The Examiner identified 107, 117 as pinholes and 108, 118 as pinhole mask. (See page 2 of Office Action). However, *Sako* describes 107 and 117 as “light reflection portions” and 108 and 118 as “light absorption portions.” **Light reflection portions and light absorption portions are not pinholes or pinhole masks.** As is clearly seen in Fig. 1 of *Sako* and described in para. [0038], light reflection portions 107 reflect light. They do not function as “pinholes”. As taught by Applicant in para. [0013], light passes through pinholes and incident light “goes through the pinhole mask.” Further illustrating the point, in paragraph [0047], *Sako* teaches “it is preferable to use light interference films as the light reflection portions 107 shown in FIG. 1.” How can a pin hole, as claimed by Applicants, be a “light interference film”?

Therefore, Applicants respectfully submit that *Sako* fails to disclose or suggest a display device “wherein the light is focused into a pinhole by a lens of the array of electrically controllable lenses to illuminate the associated pixel and is transmitted unfocused by the lens to darken the associated pixel” (underlining added) as recited in Claim 26. Applicants further respectfully submit that *Sako* fails to disclose or suggest “if it is determined to illuminate the pixel, controlling a lens of the array of electrically controllable lenses to focus the received light into a pinhole of an array of pinholes” (underlining added) as recited in Claim 33.

Applicants further submit that the disclosure by *Engle* fails to cure the deficiencies of *Sako*. While *Engle* may disclose a transmissive viscoelastic substance as a material suitable for a transmissive deformable media layer (see col. 3, lines 5-15), Applicants respectfully submit that *Engle* fails to disclose or suggest a display device “wherein the light is focused into a pinhole by a lens of the array of electrically controllable lenses to illuminate the associated pixel and is transmitted unfocused by the lens to darken the associated pixel” (underlining added) as recited in Claim 26. Applicants further respectfully submit that *Engle*

fails to disclose or suggest “if it is determined to illuminate the pixel, controlling a lens of the array of electrically controllable lenses to focus the received light into a pinhole of an array of pinholes” (underlining added) as recited in Claim 33.

For at least the reasons set forth above, Applicants respectfully submit that *Sako*, and *Engle*, alone and in combination, fail to disclose, suggest, or describe all of the elements of at least independent Claims 26 and 33. Neither an anticipation rejection nor an obviousness rejection can be properly maintained where the references cited fail to teach all of the recited claim elements. As a result, Applicants respectfully request allowance of independent Claims 26 and 33. The remaining claims depend from one of Claims 26 and 33. Therefore, Applicants respectfully request allowance of Claims 26-40.

Applicants believe that the present application is in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by the credit card payment instructions in EFS-Web being incorrect or absent, resulting in a rejected or incorrect credit card transaction, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicants hereby petition for such extension under 37 C.F.R. § 1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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